

A large, stylized letter 'A' is formed using the characters 'S' and 'Y'. The letter is symmetrical and composed of multiple rows of these characters. The top of the 'A' is formed by a row of 'S's, followed by rows of 'Y's and 'S's. The middle section consists of rows of 'Y's. The bottom of the 'A' is formed by rows of 'S's. The overall shape is a wide, triangular letter with a central vertical stem.

```
SSSSSSSS  CCCCCCCC  HH      HH  EEEEEEEEE  DDDDDDDD
SSSSSSSS  CCCCCCCC  HH      HH  EEEEEEEEE  DDDDDDDD
SS      CC      HH      HH  EE      DD      DD
SS      CC      HH      HH  EE      DD      DD
SS      CC      HH      HH  EE      DD      DD
SS      CC      HH      HH  EE      DD      DD
SSSSSS      CC      HHHHHHHHHH  EEEEEEEE  DD      DD
SSSSSS      CC      HHHHHHHHHH  EEEEEEEE  DD      DD
      SS      CC      HH      HH  EE      DD      DD
      SS      CC      HH      HH  EE      DD      DD
      SS      CC      HH      HH  EE      DD      DD
SSSSSSSS  CCCCCCCC  HH      HH  EEEEEEEEE  DDDDDDDD
SSSSSSSS  CCCCCCCC  HH      HH  EEEEEEEEE  DDDDDDDD
      ....
      ....
      ....
      ....
```

```
LL      IIIIII  SSSSSSSS
LL      IIIIII  SSSSSSSS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SSSSSS
LL      II      SSSSSS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SS
LLLLLLLLLL  IIIIII  SSSSSSSS
LLLLLLLLLL  IIIIII  SSSSSSSS
```


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SCH\$RESCHED RESCHEDULING INTERRUPT HANDLER


```
0000 1 .TITLE SCHED RESCHEDULING INTERRUPT HANDLER
0000 2 .IDENT 'V04-000'
0000 3 *****
0000 4 *****
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0000 22 *
0000 23 *
0000 24 *****
0000 25 *****
0000 26 MODIFIED BY:
0000 27
0000 28 V03-006 KPL0001 Peter Lieberwirth 15-Jan-1984
0000 29 Fix some broken work displacements, in fact, fix them all.
0000 30
0000 31 V03-005 TMK0001 Todd M. Katz 20-Dec-1983
0000 32 Fix some broken word displacements.
0000 33
0000 34 V03-004 WMC0004 Wayne Cardoza 10-Jan-1982
0000 35 Fix some broken word displacements.
0000 36
0000 37 V03-003 JWH0143 Jeffrey W. Horn 30-Nov-1982
0000 38 Back-out JWH0136, code that broke references is now in
0000 39 another PSECT.
0000 40
0000 41 V03-002 JWH0136 Jeffrey W. Horn 24-Nov-1982
0000 42 Fix broken references.
0000 43
0000 44 V03-001 KDM0083 Kathleen D. Morse 31-Mar-1982
0000 45 Add multi-processing hooks for replacement scheduling routines.
0000 46
0000 47
```



```
0000 49 ; INCLUDE FILES:
0000 50
0000 51 $DYNDEF ;STRUCTURE TYPE CODE DEFINITIONS
0000 52 $IPLDEF ;INTERRUPT PRIORITY LEVEL DEFINITIONS
0000 53 $PCBDEF ;PCB DEFINITIONS
0000 54 $PHDDEF ;PHD DEFINITIONS
0000 55 $PRDEF ;PROCESSOR REGISTER DEFINITIONS
0000 56 $STATEDEF ;STATE DEFINITIONS
00000000 57 .PSECT AEXENONPAGED, LONG ; NONPAGED EXEC
```



```

0000 59 .SBTTL SCH$RESCHED RESCHEDULING INTERRUPT HANDLER
0000 60 :++
0000 61 : SCH$RESCHED - RESCHEDULING INTERRUPT HANDLER
0000 62 :
0000 63 : THIS ROUTINE IS ENTERED VIA THE IPL 3 RESCHEDULING INTERRUPT.
0000 64 : THE VECTOR FOR THIS INTERRUPT IS CODED TO CAUSE EXECUTION
0000 65 : ON THE KERNEL STACK.
0000 66 :
0000 67 : ENVIRONMENT:
0000 68 : IPL=3 MODE=KERNEL IS=0
0000 69 : INPUT:
0000 70 : 00(SP)=PC AT RESCHEDULE INTERRUPT
0000 71 : 04(SP)=PSL AT INTERRUPT.
0000 72 :--
0000 73 :.ALIGN LONG
0000 74 MPH$RESCHED:: ;MULTI-PROCESSING CODE HOOKS IN HERE
0000 75 SCH$RESCHED:: ;RESCHEDULE INTERRUPT HANDLER
0000 76 SETIPL #IPL$_SYNCH ;SYNCHRONIZE SCHEDULER WITH EVENT REPORTING
0000 77 SVPCTX ;SAVE CONTEXT OF PROCESS
51 00000000'EF 07 0003 78 MOVL L^SCH$GL_CURPCB,R1 ;GET ADDRESS OF CURRENT PCB
52 00000000'EF 9A 000B 79 MOVZBL PCBSB_PRI(R1),R2 ;CURRENT PRIORITY
00 00000000'EF 52 E2 000F 80 BBSS R2,L^SCH$GL_COMQS,10$ ;MARK QUEUE NON-EMPTY
53 00000000'EF 2C A1 0C B0 0017 81 10$: MOVW #SCH$C_COM,PCBSW_STATE(R1) ;SET STATE TO RES COMPUTE
53 00000000'EF 93 61 7E 001B 82 MOVAQ SCH$AQ_COM[R2],R3 ;COMPUTE ADDRESS OF QUEUE
0000 83 INSQUE (R1),@R3)+ ;INSERT AT TAIL OF QUEUE
0000 84
0000 85 :+
0000 86 : SCH$SCHED - SCHEDULE NEW PROCESS FOR EXECUTION
0000 87 :
0000 88 : THIS ROUTINE SELECTS THE HIGHEST PRIORITY EXECUTABLE PROCESS
0000 89 : AND PLACES IT IN EXECUTION.
0000 90 :--
0000 91 MPH$SCHED:: ;MULTI-PROCESSING CODE HOOKS IN HERE
0000 92 SCH$SCHED:: ;SCHEDULE FOR EXECUTION
0000 93 SETIPL #IPL$_SYNCH ;SYNCHRONIZE SCHEDULER WITH EVENT REPORTING
52 00000000'EF 20 00 EA 0029 94 FFS #0,#32,L^SCH$GL_COMQS,R2 ;FIND FIRST FULL STATE
53 00000000'EF 45 13 0032 95 BEQL SCH$IDLE ;NO EXECUTABLE PROCESS??
53 00000000'EF 42 7E 0034 96 MOVAQ SCH$AQ_COMH[R2],R3 ;COMPUTE QUEUE HEAD ADDRESS
54 00000000'EF 93 0F 003C 97 REMQUE @R3)+,R4 ;GET HEAD OF QUEUE
54 00000000'EF 44 1D 003F 98 BVS QEMPTY ;BR IF QUEUE WAS EMPTY (BUG CHECK)
00 00000000'EF 08 12 0041 99 BNEQ 20$ ;QUEUE NOT EMPTY
00 00000000'EF 52 E5 0043 100 BBCC R2,L^SCH$GL_COMQS,20$ ;SET QUEUE EMPTY
00 00000000'EF 0A A4 0C 91 004B 101 20$: CMPB #DYN$C_PCB,PCBSB_TYPE(R4) ;MUST BE A PROCESS CONTROL BLOCK
00 00000000'EF 34 12 004F 102 BNEQ QEMPTY ;OTHERWISE FATAL ERROR
00 00000000'EF 2C A4 0E B0 0051 103 MOVW #SCH$C_CUR,PCBSW_STATE(R4) ;SET STATE TO CURRENT
00 00000000'EF 0B A4 2F A4 91 0055 104 MOVL R4,L^SCH$GL_CURPCB ;NOTE CURRENT PCB LOC
00 00000000'EF 08 13 0061 105 CMPB PCBSB_PRI(R4),PCBSB_PRI(R4) ;CHECK FOR BASE
00 00000000'EF 03 0B A4 08 13 0061 106 BEQL 30$ ;PRIORITY=CURRENT
00 00000000'EF 0B A4 04 E1 0063 107 BNEQ #4,PCBSB_PRI(R4),30$ ;YES, DONT FLOAT PRIORITY
00 00000000'EF 0B A4 96 0068 108 INCB PCBSB_PRI(R4) ;DONT FLOAT REAL TIME PRIORITY
00 00000000'EF 10 18 A4 90 006B 109 MOVB PCBSB_PRI(R4),L^SCH$GB_PRI ;MOVE TOWARD BASE PRIO
00 00000000'EF 10 18 A4 DA 0073 110 MTPR PCBSL_PHYPCB(R4),#PR$_PCBB ;SET GLOBAL PRIORITY
00 00000000'EF 06 02 0077 111 LDPCTX ;SET PCB BASE PHYS ADDR
00 00000000'EF 02 0078 112 REI ;RESTORE CONTEXT
0000 0079 113 ;NORMAL RETURN
0000 114
0000 115

```


SCHED
V04-000

RESCHEDULING INTERRUPT HANDLER E 5 16-SEP-1984 01:09:22 VAX/VMS Macro V04-00
SCH\$RESCHED RESCHEDULING INTERRUPT HANDL 5-SEP-1984 03:47:19 [SYS.SRC]SCHED.MAR;1

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```
00000000'EF 20 90 0079 116 SCH$IDLE: ;NO ACTIVE, EXECUTABLE PROCESS
A1 11 0079 117 SETIPL #IPL$ SCHED ;DROP IPL TO SCHEDULING LEVEL
007C 118 MOV B #32,L* SCH$GB_PRI ;SET PRIORITY TO -1(32) TO SIGNAL IDLE
0083 119 BR B SCH$SCHED ;AND TRY AGAIN
0085 120
0085 121 QEMPTY: BUG_CHECK QUEUEMPTY,FATAL ;SCHEDULING QUEUE EMPTY
0089 122
0089 123 .END
```


SCHED
Symbol table

RESCHEDULING INTERRUPT HANDLER

F 5

16-SEP-1984 01:09:22 VAX/VMS Macro V04-00
5-SEP-1984 03:47:19 [SYS.SRC]SCHED.MAR;1

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```
BUG$_QUEUEEMPTY      ***** X 02
DYN$PCB              = 0000000C
IPL$SCHED            = 00000003
IPL$SYNCH            = 00000008
MPH$RESCHED          = 00000000 RG 02
MPH$SCHED            = 00000026 RG 02
PCB$B_PRI            = 0000000B
PCB$B_PRI_B          = 0000002F
PCB$B_TYPE           = 0000000A
PCB$B_PHYPCB         = 00000018
PCB$B_STATE          = 0000002C
PR$IPL               = 00000012
PR$PCBB              = 00000010
QEMPTY              = 00000085 R 02
SCH$AQ_COMH          ***** X 02
SCH$AQ_COMT          ***** X 02
SCH$C_COM            = 0000000C
SCH$C_CUR            = 0000000E
SCH$GB_PRI           ***** X 02
SCH$GL_COMQS         ***** X 02
SCH$GL_CURPCB        ***** X 02
SCH$IDCE             = 00000079 R 02
SCH$RESCHED          = 00000000 RG 02
SCH$SCHED            = 00000026 RG 02
```

-----+
! Psect synopsis !
-----+

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 (0.)	00 (0.)	NOPIC USR
\$ABSS	00000000 (0.)	01 (1.)	NOPIC USR
AEXENONPAGED	00000089 (137.)	02 (2.)	NOPIC USR

CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE
CON REL LCL NOSHR EXE RD WRT NOVEC LONG

-----+
! Performance indicators !
-----+

Phase	Page faults	CPU Time	Elapsed Time
Initialization	35	00:00:00.04	00:00:01.80
Command processing	121	00:00:00.49	00:00:04.83
Pass 1	204	00:00:04.83	00:00:16.79
Symbol table sort	0	00:00:00.72	00:00:02.12
Pass 2	42	00:00:00.88	00:00:02.62
Symbol table output	4	00:00:00.04	00:00:00.04
Psect synopsis output	2	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	410	00:00:07.02	00:00:28.23

The working set limit was 1200 pages.
26594 bytes (52 pages) of virtual memory were used to buffer the intermediate code.
There were 30 pages of symbol table space allocated to hold 515 non-local and 3 local symbols.
123 source lines were read in Pass 1, producing 13 object records in Pass 2.
15 pages of virtual memory were used to define 14 macros.

+-----+
! Macro library statistics !
+-----+

Macro library name

Macros defined

\$255\$DUA28:[SYS.OBJ]LIB.MLB;1
\$255\$DUA28:[SYS.LIB]STARLET.MLB;2
TOTALS (all libraries)

7
4
11

594 GETS were required to define 11 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LISS:SCHED/OBJ=OBJ\$:SCHED MSRC\$:SCHED/UPDATE=(ENH\$:SCHED)+EXECMLS/LIB

0380

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CONFIDE**

[illegible]